

5.1 Relationships with Two Variables p282

Linear Relationships which combine two quantities can be represented by the equation $ax + by = c$

Eqn of a Line

$y = mx + b$ - slope y int form

$Ax + By + C = 0$ - Standard Form

$ax + by = c$ - Two variable Form

Apr 22-11:20 AM

p. 282 $ax + by = c$

Stocks + GIC = 500 interest

$0.10 \text{ stocks} + 0.04 \text{ GIC} = \500 WORD EQN

$$0.10x + 0.04y = 500$$

$x = \$ \text{invested in stocks}$
 $y = \$ \text{invested in GICs}$



Apr 22-1:12 PM

$$0.10x + 0.04y = 500$$

Graph using x and y intercepts

$$x = 0$$

$$0.10(0) + 0.04y = 500$$

$$\frac{0.04y}{0.04} = \frac{500}{0.04}$$

$$y = 12500$$

$(0, 12500)$

If she invests 12 500 in GICs she will earn \$500 in interest.

Apr 22-1:19 PM

$$0.10x + 0.04y = 500$$

Graph using x and y intercepts

$$y = 0$$

$$0.10x + 0.04(0) = 500$$

$$\frac{0.10x}{0.10} = \frac{500}{0.10}$$

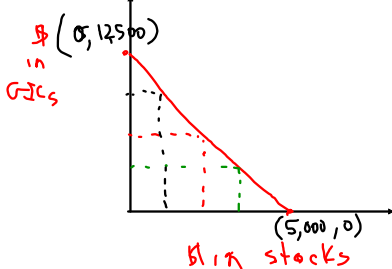
$$(5000, 0) \quad x = 5000$$

If she invests 5000 in stocks she will earn \$500 in interest.



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$$0.10x + 0.04y = 500$$



Apr 22-1:27 PM

If you invest \$3000 in GICs, how much would you need to invest in stocks to earn \$500.

$$0.10x + 0.04y = 500$$

$$y = 3000$$

$$0.10x + 0.04(3000) = 500$$

$$0.10x + 120 = 500$$

$$0.10x = 500 - 120$$

$$\frac{0.10x}{0.10} = \frac{380}{0.10}$$

$$x = 3800$$

In order to earn \$500 in interest you would need to invest \$3800 in stocks and \$3000 in GICs.

Apr 22-1:30 PM

Ques #3 p. 286

$$3(\text{chairs}) + 7(\text{tables}) = 60$$

$$3x + 7y = 60$$

x = # of chairs

y = # of tables

$$x = 0$$

$$3(0) + 7y = 60$$

$$7y = 60$$

$$y = \frac{60}{7}$$

$$y = 8.6$$

$$y = 0$$

$$3x + 7(0) = 60$$

$$3x = 60$$

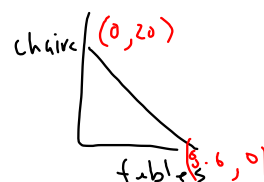
$$\frac{3}{3} = \frac{60}{3}$$

$$x = 20$$

$$\#3 \quad 3 \text{ hr chair} + 7 \text{ hr table} = 60$$

$$3x + 7y = 60$$

$$\begin{array}{c|c} x & y \\ \hline c & t \\ \hline 0 & 8.6 \\ 5 & \\ 10 & \\ 20 & 0 \end{array}$$



Apr 22-1:40 PM

Apr 19-7:20 AM

$$3x + 7y = 60$$

x = # of chairs

$$x = 10$$

$$3(10) + 7y = 60$$

$$30 + 7y = 60$$

$$7y = 60 - 30$$

$$7y = 30$$

$$\frac{7}{7} = \frac{30}{7}$$

$$y = 4.3$$

If Jamie makes
10 chairs she has
time to make
4.3 tables in a
60 hour work week.

p 286 q 4-8 textbook

Apr 19-8:52 AM

Apr 22-1:37 PM

Nov 2-8:12 AM